**Concept**

'Creating a synthesis between EWF and architectural expression.'

- **new beacon in Gardencity 2.0**
- **use the environmental energy Minewater 2.0**

- **2 buildings, 2 systems**
- **open and closed facades**
- **innovation on the closed facades**

- **improvement of the routing**
- **cross cut facades**
- **vibe for air supply and daylight, vibe connects**

**North façade**
(scale 1:200)

- **façade high-rise**
  - Assymetrical expression
  - Addition of lamella to increase and/or decrease heat gain

- **vertical lamella on E- and W- façade for sun shading**
- **angle of lamella on S-façade**
- **cut outs of existing structure**

**West façade**
(scale 1:200)

- **façade low-rise**
  - Vertical expression

- **vertical lamella on E- and W- façade for sun shading**
- **angle of lamella on S-façade**
- **cut outs of existing structure**

**Form and structure**

**Existing structure**

Peter Swier - 4020820 - AE studio - P5 presentation
- pv panels
- insulated façade ducts floor
- air supply and exhaust
- climate ceilings for low temperature heating and cooling
- Alucobond around the ducts works as fixed sun shading
- operable windows for personal control over inner climate
- external roller blinds of Hunter Douglas

- raised floors for air supply at the lower floors
- installations space for the inlet of air and part of the twin coil system
- climate cascade in vide for the air supply
- installations space with:
  - connection to Minewater 2.0
  - heat pump
  - (temporary) water storage

- workspace high rise: comfort and light
  1. operable windows and wide view
  2. climate ceiling
  3. adjustable (desk) lightning
  4. personally adjustable roller blinds
  5. supply of fresh air at desk level
  6. exhaust via the ceiling to create cross ventilation

- workspace low rise: comfort and light
  1. operable windows
  2. climate ceiling
  3. adjustable (desk) lighting
  4. personally adjustable roller blinds
  5. supply of fresh air with supply atrium
  6. exhaust via the ceiling to create cross ventilation

- addition of green in three ways to improve comfort:
  - roof garden
  - plant containers around vide
  - vertical garden

- fixed external vertical lamella for sunshading
- internal roller blinds for personal control light entrance

- architectonic integration of exhaust ducts under cantilevers
- operable cantilever windows

- glass roof to increase daylight entrance

Section high-rise scale 1:100
Section low-rise scale 1:100
Added layers

- Insulation + double glazing
- Ducts and air inlets
- facade cladding and roof garden

Floor plans in scale 1:200

Niveau 9

Niveau 5

Niveau 2

Niveau 0
Detail V1 HR - roof edge
scale 1:5
1. Alucobond
1.1 Alucobond panel
1.2 U-Section 65/66/2.5 mm
1.3 Stainless steel bolt, 10 mm dia
1.4 Starlock quick fastener
1.5 Aluminium-blind rivet
1.6 Wall bracket
2. Insulation 100 mm
3. Steel balustrade element
4. Insulation 150 mm
5. Isokorf system for steel
6. Steel gutter
7. Steel frame for air ducts and alucobond
8. White bitumen
9. Vapor open layer
10. Corrugated steel plating

Detail V2 HR - window frame top
scale 1:5
1. Insulated exhaust duct 250-700 mm
2. Alucobond
3. External roller blinds - Hunter Douglas
4. Insulation 100 mm
5. PU self-levelling floor
6. Concrete 200 mm
7. Water resistant layer
8. Schuco AWS 70 operable window
9. Double glazing 26 mm
10. Wooden finishing (white) 25 mm
11. Inteco climate ceiling Oxzero

Detail V3 HR - window frame bottom
scale 1:5
1. Insulated supply duct 250-700 mm
2. Alucobond
3. Steel utter incl. rail connection roller blinds.
4. Water resistant layer
5. Insulation 100 mm
6. Steel bracket
7. Wood
8. Concrete 200 mm
9. Added structure - light weight concrete 200 mm - glued
10. Schuco AWS 70 operable window
11. Double glazing 26 mm
10. Wooden finishing (white) 25 mm

Detail V4 HR - foundation
scale 1:5
1. Natural stone tiles
2. Insulation
3. Steel gutter incl. rail connection roller blinds.
4. Water resistant layer
5. Steel bracket
6. Wood
7. Concrete floor 200 mm
8. Raised floor system
9. Schuco AWS 70 operable window
10. Double glazing 26 mm
11. Façade frame

Detail H1 LR - corner of the solar chimney and west façade
scale 1:5
1. Concrete 200 mm
2. Insulation 100 mm
3. Mirotherm absorber
3.1 Insulation Polyurethane 30 mm
3.2 Insulation glass wool 20 mm
3.3 Copper riser 16 mm
3.4 Absorber aluminium 0.5 mm
4. Tension cable fixing
5. Fixed glazing
6. Customized sunshading
7. Schuco element facade
8. Double glazing 26 mm
9. SGG Planitherm Solar glas 4/15/4 argon

Detail H3 LR - corner of the west and south façade
scale 1:5
1. Schuco element facade AWS 102 (cantilever window)
2. Double glazing 26 mm
3. Prefabrication closed element
3.1 matte white aluminium finish
3.2 insulation 130 mm
3.3 glass finish 10 mm
4. Lamel west façade 60 mm
4.1 XPS hard insulation material
4.2 white aluminium finish
5. Sunshading element south façade (two vertical lamella with horizontal lamella in between)

Detail V1 LR - roof edge west façade
scale 1:5
1. Lamel west façade 60 mm
4.1 XPS hard insulation material
4.2 white aluminium finish
2. Prefabrication closed element
3.1 matte white aluminium finish
3.2 insulation 130 mm
3.3 glass finish 10 mm
3. Insulation 140 mm
4. Insulation 95 mm
5. Water resisting layer
6. Aluminium roof edge cover
7. Wooden keystone

Detail V2 LR - floor connection west façade
scale 1:5
1. Lamel west façade 60 mm
2. Lamel connection
3. Prefabrication closed element
3.1 matte white aluminium finish
3.2 insulation 130 mm
3.3 glass finish 10 mm
4. Connection of the façade element
5. Electircal sunshading
6. Exhaust duct 315 mm

Detail V3 LR - foundation west façade
scale 1:5
1. Lamel west façade 60 mm
2. Schuco element facade AWS 102 (cantilever window)
3. Street tiles (natural stone) 26 mm
4. Concrete gutter element
5. Insulation 170 mm
6. Hard façade plating 25 mm
7. Insulation 100 mm
8. Concrete floor 200 mm
9. Connection of the façade element
10. Matte white aluminium platng finish with integrated wall plug
11. Epoxy floor

Detail V2 LR - floor connection west façade
scale 1:5
1. Lamel west façade 60 mm
2. Lamel connection
3. Prefabrication closed element
3.1 matte white aluminium finish
3.2 insulation 130 mm
3.3 glass finish 10 mm
4. Connection of the façade element
5. Electircal sunshading
6. Exhaust duct 315 mm

Detail V3 LR - foundation west façade
scale 1:5
1. Lamel west façade 60 mm
2. Schuco element facade AWS 102 (cantilever window)
3. Street tiles (natural stone) 26 mm
4. Concrete gutter element
5. Insulation 170 mm
6. Hard façade plating 25 mm
7. Insulation 100 mm
8. Concrete floor 200 mm
9. Connection of the façade element
10. Matte white aluminium platng finish with integrated wall plug
11. Epoxy floor